



**Hazen Research, Inc.**  
4601 Indiana Street  
Golden, CO 80403 USA  
Tel: (303) 279-4501  
Fax: (303) 278-1528

Lab Control ID: 19F01476

Received: Aug 05, 2019

Reported: Sep 05, 2019

Purchase Order No.

None Received

Customer ID: 03522Z

Account ID: Z00372

Russell Huffman  
Desert View Power, Inc.  
62-300 Gene Welmas Drive  
Mecca, CA 92254-0758

# ANALYTICAL REPORT

*Report may only be copied in its entirety.  
Results reported herein relate only to discrete samples  
submitted by the client. Hazen Research, Inc. does not warrant  
that the results are representative of anything other than the  
samples that were received in the laboratory*

By: \_\_\_\_\_

Mark A. Pugh  
Fuel Laboratory Manager



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## ANALYTICAL REPORT

Russell Huffman  
Desert View Power, Inc.

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**Customer Sample ID**

**Boiler Fuel Feed 8/5/19**

Lab Sample ID

19F01476-001

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pH of a 25% Mixture

6.05

By:

Mark A Pugh  
Fuel Laboratory Manager



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## ANALYTICAL REPORT

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Desert View Power, Inc.

Customer Sample ID		Boiler Fuel Feed 8/5/19
Lab Sample ID		19F01476-001
Sodium in Ash as Na <sub>2</sub> O	%	3.19
Potassium in Ash as K <sub>2</sub> O	%	5.11
Chlorine in Ash	%	0.52
Carbon Dioxide in Ash	%	0.44

By:

Mark A Pugh  
Fuel Laboratory Manager

The sample was ashed at 600 degrees celsius prior to analysis.



None Received

Account ID: Z00372

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Desert View Power, Inc.

Lab Sample ID 19F01476-001

Reporting Basis >	As Rec'd	Dry	Air Dry
<b>Proximate (%)</b>			
Moisture	22.19	0.00	3.93
Ash	9.31	11.96	11.49
Volatile	54.39	69.91	67.16
Fixed C	14.11	18.13	17.42
Total	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>

Sulfur	0.120	0.154	0.148
Btu/lb (HHV)	5692	7316	7028
Btu/lb (LHV)	5072	6812	
MMF Btu/lb	6327	8401	
MAF Btu/lb		8310	

Moisture	22.19	0.00	3.93
Carbon	35.18	45.22	43.44
Hydrogen	4.23	5.43	5.22
Nitrogen	0.57	0.73	0.70
Sulfur	0.120	0.154	0.148
Ash	9.31	11.96	11.49
Oxygen*	28.40	36.51	35.07
Total	100.00	100.00	100.00

Chlorine**	0.116	0.149	0.143
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Lb. Alkali Oxide/MM Btu = 1.36

Lb. Ash/MM Btu= 16.35

Lb. SO<sub>2</sub>/MM Btu= 0.421

Lb. CI/MM Btu= 0.20

F-Factor(dry),DSCF/MM Btu= 9,890

Total	0.120	0.154
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Report Prepared By:

Ma Lugh

K2O	0.284	0.365
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Mark A. Pugh  
Fuel Laboratory Manager

\* Oxygen by difference

\*\* Not usually reported as part of the ultimate analysis.



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# **SAMPLE SUBMITTAL FORM**

Sample Identification

**BOILER FUEL FEED**

Date

8-5-19

- ☒ Ultimate, Proximate, & BTU
- ☐ Ultimate
- ☐ Proximate
- ☐ Moisture
- ☐ Ash
- ☐ Sulfur
- ☐ Calorific Value. BTU / lb
- ☒ Chlorine
- ☐ Elemental Analysis of ash ( Si, Al, Ti, Fe, Ca, Mg, Na, K, P, S as oxides)
- ☒ Chlorine in ash
- ☒ Carbon Dioxide in ash
- ☐ Fusion temperatures of ash ( oxidizing & reducing)
- ☒ Water soluble alkalis (Na<sub>2</sub>O & K<sub>2</sub>O)
- ☐ Water soluble calcium (CaO)
- ☒ Alkali, Lbs / MMBTU (Need Na<sub>2</sub>O & K<sub>2</sub>O in ash If Elemental is not run)
- ☐ Sodium in ash (Na<sub>2</sub>O)
- ☐ Potassium in ash (K<sub>2</sub>O)

Submit samples to:

Hazen research, Inc.  
 Attn: Gerard H Cunningham  
 4601 Indiana St.  
 Golden, Colorado 80403

Reports & Billing to:

Colmac Energy, Inc.  
 Paula Bates  
 Po Box 758  
 Mecca, Ca. 92254- 0758